ABSTRACT OF THE DISCLOSURE

A process for selectively removing a conductive layer from a wafer that includes sub-micron sized noble metal interconnect features is disclosed, the method including placing the wafer into an electrolyte solution. Also immersed in the electrolyte solution are a counter electrode, a reference electrode, and a working electrode. The wafer is coupled to the working electrode terminal on a potentiostat. The counter electrode is connected to the counter electrode terminal on a potentiostat, and the reference electrode is connected to a reference electrode terminal on the potentiostat. The potentiostat adjusts the electrical current flowing between the wafer and the counter electrode to maintain a constant voltage between the wafer and the reference electrode as the conductive layer is removed. The removal of the conductive layer is finished when the current that maintains the constant voltage between the wafer and the reference electrode drops to a residual level.